

CPC**COOPERATIVE PATENT CLASSIFICATION****C23G**

CLEANING OR DEGREASING OF METALLIC MATERIAL BY CHEMICAL METHODS OTHER THAN ELECTROLYSIS (polishing compositions [C09G](#); detergents in general [C11D](#))

C23G 1/00

Cleaning or pickling metallic material with solutions or molten salts (with organic solvents [C23G 5/02](#))

- C23G 1/02 . with acid solutions
- C23G 1/025 .. {acidic pickling pastes}
- C23G 1/04 .. using inhibitors
- C23G 1/06 ... organic inhibitors

NOTE

In groups [C23G 1/061](#) to [C23G 1/068](#) an invention is classified in the last appropriate place

- C23G 1/061 {nitrogen-containing compounds}
- C23G 1/063 {heterocyclic compounds}
- C23G 1/065 {sulfur-containing compounds}
- C23G 1/066 {phosphorus-containing compounds}
- C23G 1/068 {compounds containing a C=C bond}
- C23G 1/08 .. Iron or steel

NOTE

In groups [C23G 1/081](#) to [C23G 1/088](#) an invention is classified in the last appropriate place

- C23G 1/081 ... {solutions containing H₂SO₄}
- C23G 1/083 ... {solutions containing H₃PO₄}
- C23G 1/085 ... {solutions containing HNO₃}
- C23G 1/086 ... {solutions containing HF}
- C23G 1/088 ... {solutions containing organic acids}
- C23G 1/10 .. Other heavy metals
- C23G 1/103 ... {copper or alloys of copper}
- C23G 1/106 ... {refractory metals}
- C23G 1/12 .. Light metals
- C23G 1/125 ... {aluminium}
- C23G 1/14 . with alkaline solutions
- C23G 1/16 .. using inhibitors

- C23G 1/18 . . . Organic inhibitors
- C23G 1/19 . . Iron or steel
- C23G 1/20 . . Other heavy metals
- C23G 1/205 . . . {refractory metals}
- C23G 1/22 . . Light metals

- C23G 1/24 . with neutral solutions
- C23G 1/26 . . using inhibitors

- C23G 1/28 . with molten salts
- C23G 1/30 . . using inhibitors
- C23G 1/32 . . Heavy metals
- C23G 1/34 . . Light metals

- C23G 1/36 . Regeneration of waste pickling liquors

C23G 3/00 **Apparatus for cleaning or pickling metallic material** (with organic solvents [C23G 5/04](#); {apparatus for continuously conveying articles into baths [B65G](#)})

- C23G 3/02 . for cleaning wires, strips, filaments continuously
- C23G 3/021 . . {by dipping}
- C23G 3/022 . . . {the objects following a helicoidal path}
- C23G 3/023 . . {by spraying}
- C23G 3/024 . . {by a combination of dipping and spraying}
- C23G 3/025 . . {Details of the apparatus, e.g. linings or sealing means}
- C23G 3/026 . . . {for guiding the objects}
- C23G 3/027 . . {Associated apparatus, e.g. for pretreating or after-treating}
- C23G 3/028 . . . {for thermal or mechanical pretreatment}
- C23G 3/029 . . . {for removing the pickling fluid from the objects}

- C23G 3/04 . for cleaning pipes

C23G 5/00 **Cleaning or de-greasing metallic material by other methods; Apparatus for cleaning or de-greasing metallic material with organic solvents**

NOTE

Mixtures of organic solvents are classified according to the major component

- C23G 5/02 . using organic solvents
- C23G 5/024 . . containing hydrocarbons
- C23G 5/028 . . containing halogenated hydrocarbons
- C23G 5/02803 . . . {containing fluorine}
- C23G 5/02806 . . . {containing only chlorine as halogen atom}
- C23G 5/02809 . . . {containing chlorine and fluorine}

C23G 5/02812	....	{Perhalogenated hydrocarbons}
C23G 5/02816	.....	{Ethanes}
C23G 5/02819	.....	{C2Cl3F3}
C23G 5/02822	.....	{C2Cl4F2}
C23G 5/02825	....	{containing hydrogen}
C23G 5/02829	.....	{Ethanes}
C23G 5/02832	.....	{C2H3Cl2F}
C23G 5/02835	.....	{C2H2Cl2F2}
C23G 5/02838	.....	{C2HCl2F3}
C23G 5/02841	.....	{Propanes}
C23G 5/02845	.....	{C3H3ClF4}
C23G 5/02848	.....	{C2H2Cl2F4}
C23G 5/02851	.....	{C2HCl2F5}
C23G 5/02854	...	{characterised by the stabilising or corrosion inhibiting additives}
C23G 5/02858	....	{Hydrocarbons}
C23G 5/02861	....	{Oxygen-containing compounds}
C23G 5/02864	.....	{Alcohols}
C23G 5/02867	.....	{aliphatic}
C23G 5/0287	.....	{aromatic}
C23G 5/02874	.....	{Aldehydes or ketones}
C23G 5/02877	.....	{Ethers}
C23G 5/0288	.....	{Epoxy compounds}
C23G 5/02883	....	{Nitrogen-containing compounds}
C23G 5/02887	.....	{Nitro-compounds}
C23G 5/0289	.....	{N-heterocyclics}
C23G 5/02893	....	{Sulfur-containing compounds}
C23G 5/02896	....	{Phosphorus-containing compounds}
C23G 5/032	..	containing oxygen-containing compound
C23G 5/036	...	having also nitrogen
C23G 5/04	..	Apparatus
C23G 5/06	.	using emulsions